DOCUMENT RESUME

ED 374 655 FL 022 225

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TITLE How To Analyze Interlanguage Errors.
PUB DATE 91
NOTE 13p.; Journal published by Kanagawa University (Japan). A revised version of "How To Cross-Sectionally Analyse the Whole Process of Interlanguage," paper presented at the World Congress of Applied Linguistics (9th, Greece, April, 1990).
PUB TYPE Reports - Descriptive (141) -- Journal Articles (080) -- Speeches/Conference Papers (150)
JOURNAL CIT Journal of Psychology & Education; n9 p113-22 Mar 1991

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Error Analysis (Language); Foreign Countries; *Interlanguage; *Language Research; *Linguistic Theory; Research Methodology; Second Language Instruction; *Second Language Learning; Teaching Methods; *Transfer of Training
IDENTIFIERS Japan

ABSTRACT

This paper presents an approach to analyzing the process of second language acquisition, entitled Interlanguage Analysis (IA). IA regards the transitional linguistic system from the learner's first language (L1) to the target language (L2 to TL) as interlanguage (IL). IA seeks to obtain pedagogical implications by clarifying: (1) the types of errors in the use of certain items in the target language; (2) the process through which the errors occur; and (3) the various constraints that intervene in the whole process of interlanguage. The goals of IA include the establishment of a well-knit theory of foreign language acquisition, the elucidation of teaching and learning methods and materials, and the establishment of a data-bank of universal grammar. Contains 19 references. (MDM)

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神奈川大学　心理・教育研究論集　第9号　別冊

1991年3月

FL022251

How to Analyze Interlanguage Errors

Harumitsu Mizuno

Abstract

The object of this paper is to propose an effective way to analyze the process of second language acquisition.

Language is inherently an organic and psycho－social gestalt. Hence, in order to make the teaching of a second language more successful, it is necessary to put Interlanguage Analysis into practice. The analysis should be aimed primarily at the errors with more difficult items, particularly function words. This is because if the nature of persistent errors becomes clear to us, we may obtain from those findings some useful implications for second language teaching, and the areas that we can identified and explain in the language learning will probably be expandable as well.

Presupposing that second language learners who have the same NL pursue the same developmental process of interlanguage regardless of their age, sex, and individual differences, this approach aims at obtaining pedagogical implications through clarifing (1) the types of errors in the use of certain items of the target language, (2) the process through which the errors occur, and (3) various constraints which intervene in the whole process of interlanguage.

The latter part of this paper refers to the objectives, the means by which to anayze, and the goal of this particular approach.

INTRODUCTION

So far, educators and researchers have not given grave attention to learners' errors and how to correct them in the language classroom. That is, their errors have been seen in the negative light as things to be eliminated, and the underlying problems have been rather neglected. However, human learning is basically a process which involves generating errors. Viewed in recent theories on language acquisition, when the L2 learner always uses sentences to communicate in the TL (viz, target language), owing to his innate ability for putting words together, his sentences will increasingly be closer to complete ones in the TL. Among other things, language learning should not depend on memorization; it is more generative. To put it another way,

we may not learn any rules of phonetics, vocaburaries, or syntax of our language without errors from the beginning. We acquire a model of our language through continuous hypothesis－testing activity. In other words, it may be said that we do not learn a language until we make errors in it. Thus, cognitive theorists regards the learners' errors as certain evidence of creative construction in their cognitive processes. Human learning is basically a process that involves the making of mistakes or errors. As H. Douglas Brown (1980) mentioned, L2 learning is a process that is clearly not unlike L1 learning in its trial－and －error nature. Inevitably, the learner will make errors in the process of acquisition, and indeed will even hinder that process if he does not commit errors and then benefit in turn from various forms of feedback on these errors. Therefore, the errors a person makes in the process of constructing a new system of language possibly hold in them some of the keys to illuminating the process of second language acquisition. Hence, it should be noted that such errors need to be analysed carefully in research on second language acquisition. Corder (1967: 167) noted in 'The significance of learner's errors' that "A learner's errors...are significant because they provide to researcher evidence of how language is learned or acquired, what strategies or procedures the learner is employing in the discovery of the language."

CONTRASTIVE VS. ERROR ANALYSIS

Although the first research that aimed at the errors made in the speech of foreign language learners was contrastive analysis (FIGURE 1), the goal of this analysis is rather to predict the learning difficulties than how to deal with learners' errors (TABLE 1). Therefore, the substance of their errors did not receive any light from the researchers (TABLE 2).

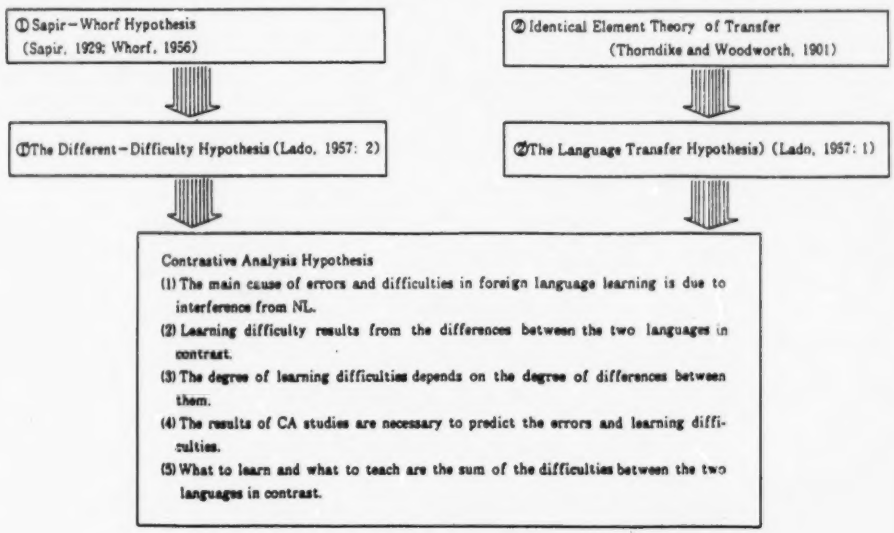
① Sapir－Whorf Hypothesis
(Sapir, 1929; Whorf, 1956)
② Identical Element Theory of Transfer
(Thorndike and Woodworth, 1901)
①The Different－Difficulty Hypothesis (Lado, 1957: 2)
②The Language Transfer Hypothesis) (Lado, 1957: 1)
Contrastive Analysis Hypothesis
(1) The main cause of errors and difficulties in foreign language learning is due to interference from NL.
(2) Learning difficulty results from the differences between the two languages in contrast.
(3) The degree of learning difficulties depends on the degree of differences between them.
(4) The results of CA studies are necessary to predict the errors and learning difficulties.
(5) What to learn and what to teach are the sum of the difficulties between the two languages in contrast.

FIGURE 1: The History of Contrastive Analysis Hypothesis

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TABLE 1.

Criticisms on Contrastive Anaiysis

1. It too much emphasized "the effect of interference."
2. It neglected the intralingual transfer.
3. It was based on the false theory of learning that is basically a matter of habit formation.
4. It regarded errors as negative elements that hinder the development of language learning.
5. It is impossible to predict precisely the learner's proficiency from the results of CA studies.
6. Such concepts as "similarity" and "difference" are not operational in case of selecting materials for instruction.

TABLE 2

The Contribution of CA

1. It provided us some hints for material production.
2. It provided some guiding principles with instruction.
3. It stimulated studies for explicating learning difficulty.

On the other hand, since 1960, as soon as error analysis clarified that learners' errors result not merely from interference of the NL, but also from many other causes, hence the mainstream of research in this field gradually shifted to that new approach. Neverthless, Schachter and Celce－Murcia (1977) pointed out that new analysis also inherents various problems (TABLE 3). That is to say, since error analysis focuses on products such as sounds and sentences which second － or foreign － language learners generate, it tends to neglect the learning process and the non－errors (i.e., avoidance errors) of them. Moreover, as the analyses leaned toward being subjective, it was impossible to grasp a clear picture of the substance of their errors.

TABLE 3

The Weekness of Error Analysis

(1) The Analysis of Error in Isolation
(2) The Proper Classification of Identified Errors
(3) Statements of Error Frequency
(4) The Identification of Points of Difficulty in the Target Language
(5) The Ascription of Causes to Systematic Errors
(6) The Biased Nature of Sampling Procedures

Schachter and Celce－Murcia(1977)

Both theories conflict with each other and embrace merits and demerits. What is needed today is a merging of both theories so as to establish a more integrated theory in this field and to accumulate the date based on such a new theory of second language acquisition.

INTERRANGUAGE

Selinker (1972) aimed at the type of language produced by second and foreign－language learners who are in the process of learning a language. He named such a transitional language system 'interlanguage.' S. P. Corder (1972) claimed that such a learner's language has an independent system in itself; it is reflected in the errors. To put it in another way, there are systematic and non－systematic errors in normal adult language. The object of researcher is the former. We may say that such errors reveal the underlying competence of second or foreign language learners. S. P. Corder (1967) also claimed that learners' errors are important for the researchers because they provide evidence of the system of the language that he is using (i.e., has learned) at a particular point in the course (and it must be repeated that he is using some system, although it is not yet the right system). These errors are significant in three ways. First to the teacher, in that they tell him, if he undertakes a systematic analysis, how far towards the goal the learner has progressed and, consequently, what remains for him to learn. Second, they provide to the researcher evidence of how language is learned or acquired, what strategies or procedures the learner is employing in his discovery of the language. Third, they are indispensable to the learner himself, because we can regard the making of errors as a device the learner uses in order to learn. Henceforth, the making of errors is a strategy employed both by children acquiring their NL, (i.e., native language) and by those learning a second language.

INTERLANGUAGE DEVELOPMENT

Cognitive learning theory claims that learning is basically a matter of meaningful dynamics in which individuals constantly reconstruct their "cognitive structures" or "schemata" (cf. Ausubel, 1960; Bruner, 1978; Gagne, 1972; Piaget, 1963). Thus, cognitive theorists share such a concept as the development of knowledge by relating new knowledge to an individual's prior knowledge about the world. In other words, learning occurs when the learner relates new information to previously acquired knowledge. This framework of cognitive theorists supports the view that L2 learning involves the process of assimilation and accommodation. The process of L2 learning consists of restructuring as an L1－dependent process, and recreating as an L1 － independent process. Although restructuring is predominant at early stages of L2 learning, recreating generally takes the place of restructuring as the dominant learnign process. Therefore, L2 learning is a creative－construction process involving hypothesis testing activity. Learner's knowledge about L1 constrains their initial hypotheses and the process of interlanguage development just as the limitations of their knowledge about the TL. do(cf. Schachter, 1981; Zobl, 1982). Thus,

since the perception of L2 learners shifts from holystic to analytic, the psychological process of interlanguage development can be illustrated as FIGURE 2.

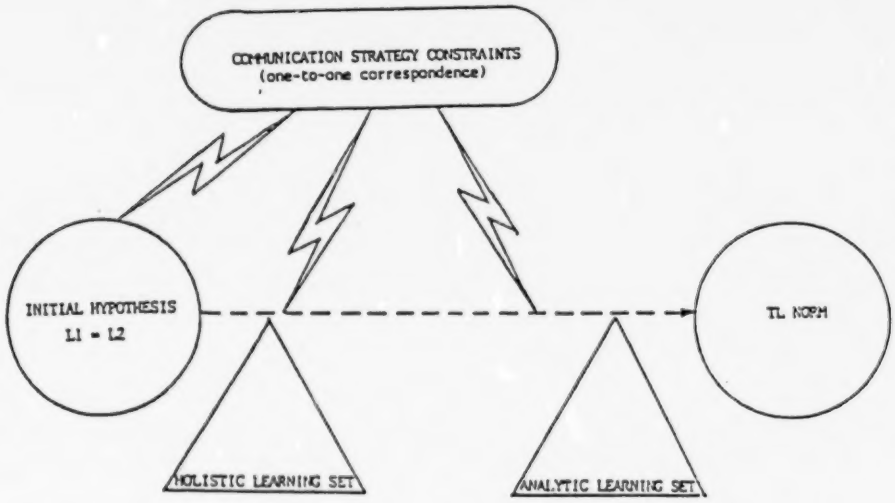

FIGURE 2: Psychological Process of Interlanguage Development

LONGITUDINAL VS. CROSS – SECTIONAL STUDY

We commonly observe in a learner's language various erroneous features persisting in the speech of those who have otherwise a fluent command of the language. The relatively permanent incorporation of incorrect linguistic forms into a person's second language skill has been referred to as 'fossilization.' In order to rightly interpret this situation, Corder (1975) suggested the necessity of longitudinal study on interlanguage development and its learnig milieu. He received a hint from child studies in first language acquisition to propose this suggestion. However, in practice, it is very hard, or almost impossible, to carry out his suggestion. This is partly because access to child L2 learners is very limited, or not easy, in ordinary classrooms, and partly because case studies of adult L2 learners, who may be easy to access in ordinary second/foreign language classrooms, would get into lots of practical difficulties.

Why is cross – sectional study inappropriate to uncover the mechanism of fossilization in the latent structure of second language learners ? So far, almost all morpheme acquisition studies have been carried out in a cross – sectional approach. The studies mentioned above contain two defects. (See TABLE 4). One is that the data obtained through such an approach only comes at a phase of the interlanguage process. The other is that the generalization of the data gained through such small samples is potentially explosive. H.Mizuno (1987) proposed to reinforce such weaknesses of the cross – sectional approach.

TABLE 4

Longitudinal VS, Cross-Sectional Approaches

	Longitudinal Approach (Case Study)	Cross－Sectional Approach (Sample Survey)
Merits	1. It helps to explain the subtle distinctions among available, individuals and reciprocal relations to one another. 2. It enables to observe the change in time. 3. The characteristics of the subject of this study can be utilized without diminishing the value at the level of a common denominator.	1. It is easy to guarantee the objectivity of the results. 2. The whole tendency of the study is very understandable. 3. It is easy to generalize the results of the study. 4. Utilizing a computer data base, it can be carried out in a short time.
Demerits	1. It cannot vouch for the universality and generalization of the result. 2. There is the possibility of a subjective interpretation. 3. It is very difficult to get the global perspective of the study.	1. It costs a great deal. 2. The results are apt to be lacking in variety.

We may regard fossilization as persistent errors repeated in the interlanguage prcess. In other words, it is the internalization of incorrect forms, and a part of what we commonly call acquisition. As a matter ofcourse, learning is also conductive to the internalization of some knowledge. However, the difference between learning and acquisition, as Earl Stevick said, lies in the nature of images. In learning, the image which we reconstruct of what we are after is poor and unintegrated, while in acquisition, it is rich and well integrated. The process of interlanguage is that in which images of information become more fertile and come to be integrated.

Although the problem of individual difference in learning is really the factor to be duly considered, in the acquisition of the language, such a factor is minimized. Second language acquisition is a process that is similar to first language acquisition in its trial－and－error nature. As Corder (1967) also noted, "the procedures or strategies adopted by the learner of the second language are fundamentally the same. "The principle feature that then differentiate the two operations is the presence or absence of motivation." However, interference is a crucial aspect of the second language acquisition process (cf.Andersen, 1983; Brown, 1980; Kellerman, 1977; Zobl, 1980).

INTERLANGUAGE ANALYSIS

Along with this line of thinking, H. Mizuno

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(1986) proposed 'Interlanguage Analysis' as a comprehensive approach that includes the merits of both CA theory and EA theory, and aims at uncovering the process of second language acquisition. Interlanguage Analysis is based on Cognitive learning theory.

It postulates that the process of interlanguage which the adult learners of the same NL background follow, regardless of their age, sex, andeducational background, is basically the same. In order to ensure the dynamic integration of learners' interlanguage, providing a large sample of adult subjects with proficiency testing, we first set up at least three levels of learners (Beginning, Intermediate, and Advanced Levels).

By means of this design, we can follow the developmental process of learning a specific item by means of a cross-sectional approach. Moreover, in order to analyse the causes of errors, we employ a questionnaire about the subjects' answers along with the empirical test questions. The main feature of this approach and the goals of the study are summarized as follows:

The Objects of the Analysis

(i) Linguistic analysis at a process level

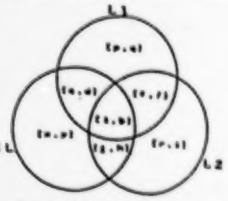
In order to investigate systematically the vicissitude of an error in the interlanguage, from the formation to the extinction of the error, through a rigorous sampling procedure setting up at least three levels of learners based on their score of proficiency test, we should follow the whole process of learning on a specific item.

(ii) Linguistic analysis at the multi-level

In order to establish a more comprehensive theory of SLA, it is necessary to be involved in hypothesis testing at the multilevel from morpheme to dicourse level. Among others, in order to make the teaching/learning of a second/foreign language more successful, Interlanguage Analysis should be brought to focus on the error of more difficult items in language learning, such as function words, which help to relate words, phrases, clauses, and sentences with each other in a discourse. The mastery of function words intimately relates to the performance of a language which is inherently an organic and psychosocial gestalt. Moreover, most persistent errors in the process of interlanguage result from the inappropriate use of function words. If the nature of persistent errors is made clear to us through this analysis, we may obtain from those findings some useful implications for second/foreign language teaching, and the domain that we can explain about the language will probably be expandable as well.

(iii) Analysis of interlingual semantic differences

In case of probing the causes of errors, it is important to clarify the common elements of class words among three languages (viz. L1, IL, L2), those elements between two languages, and the elements in each of them. Therefore, in order to build up Interlingual Semantic Taxonomies, this approach also involves in the analysis of reciprocal semantic differences among L1, IL, and L2, (TABLE 5).



The Model of Interlingual Semantic Taxonomy

TABLE 5

Interlingual Semantic Taxonomy

L1=Japanese　L2=English

Area	Category	Examples
(a,b)	Congruence	L1=IL=L2 Aoi kuruma=A blue car L1=L2
(c,d)	Interference	Aoi ringo= A green apple L1=L2
(e,f)	Underextension	(ani +otouto)=kyoudai=brother L1=L2
(g,h)	Overextension	kawa (川) =(river+brook) L1
(p,q)	L1 Prototypicality	Hanamatsuri, Sake L2
(r,s)	L2 Prototypicality	Halloween IL=L2
(x,y)	Overgeneralization	use a mouse for a squirrel

The Model of Interlingual Semantic Taxonomy

(iv) Analysis of strategies involved in learning

When interpreting the process of Interlanguage, it is indispensable to analyze not merely learning strategies but also communicative strategy and discourse strategy as the target.

Means by Which to Do the Analysis

1. Sampling

(i) In order to ensure data of errors concerning a specific item in the process of interlanguage, it is necessary to set up at least three levels of learners based on their scores from proficiency test of TL.

(ii) In order to keep the effect of individual differences within an accidental error, it is also necessary to ensure a large enough sample, keeping the number of subjects in each cell of the test to more than 30.

(iii) In order to grasp the actual state of errors in the process, it is necessary to have approximately the same number of subjects in each level.

2. Test Production

(i) The essential condition of the test is to have a rigorous scientific approach utilizing statistical procedures providing practicability, validity, sufficient reliability, and instructional value.

(ii) The frequency of errors does not necessarily show the degree of learning difficulty in a certain item; it is important to use both a judgmental test and a productive test or a method that includes both elements.

(iii) In producing test questions, it is also important to design them so as to keep the subject from making avoidance errors.

3. Determining the Causes of Errors:

(i) In order to bring out learners' latent errors, it is most advisable to use the learners' internal report about the reason why they gave the answer to each question with an elicitation procedure (i.e., a kind of test procedure which sets up a condition that must utilize a specific item) based on the working hypotheses.

(ii) So far most of error analysis have been attempted by researchers who pay no attention to the learners' L1. As a result, it is pointed out that they considered only learners' errors, and they have ignored their non − errors. Therefore, in order to elucidate the real causes of the learners' errors, it is indispensable that the researcher be bilingual (L1 and TL). In this way, it would become possible, when researchers make analysis of the viewpoints of both teachers and learners, to predict the real causes of errors.

4. Feedback of the Findings

(i) The findings which result from the analysis should be practiced and checked in a real classroom setting.

(ii) Such findings should also be checked with other findings so as to build a network for the exchange of data toward a universal grammar.

The Goal of the Study

(i) To establish a well−knit theory of second /foreign language acquisition

In order to clarify the processes of second language acquisition, we need to accumulate data, indicating precisely how the acquisition processes differ due to the difference of learning conditions, such as L1 background, the level of L2, and age.

(ii) To elucidate the teaching and learnign of L2

This analysis in second/foreign language education involves three points: (1) the disposal of errors in the classroom (as the question of feedback), (2) the sequence of the presentation of materials (as the question of presentation), and (3) the production of teaching materials and curriculum (as the question of materials).

(iii) To establish a data bank for universal grammar

Completing the Interlingual Semantic Taxonomics (cf. The Object of the Analysis(iii)), such data would become parts of the data bank for universal grammar. Furthermore, providing data gained through this approach, with feedback in real classroom settings, and constructing a network of those data would favour uncovering learners' strategies in the course of the interlanguage process.

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This is a revised paper of "How to Cross-Sectionally Analyse the Whole Process of Interlanguage" presented at IXth World Congress of Applied Linguistics in Greece, April, 1990.